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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/785,638 | 02/24/2004 | Mihal Lazaridis | 555255012720 | 2388 |

7590 10/31/2006

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EXAMINER

NGUYEN, KEVIN M

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2629

DATE MAILED: 10/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/785,638

Applicant(s)

LAZARIDIS ET AL.

Examiner

Kevin M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17 is/are allowed.
- 6) ☒ Claim(s) 1-7 and 10-16 is/are rejected.
- 7) ☒ Claim(s) 8 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 11/26/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 5, 10, 11 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Mizutani et al (US 6,744,416) hereinafter Mizutani.

3. As to claim 1, Mizutani teaches an electronic device in col. 10, lines 47-49, comprising: a field sequential liquid crystal display with a liquid crystal layer (101) and a plurality of color backlights (503a and 503b); and a control module (30) for controlling the continuous illumination of one or more of the plurality of color backlights to provide a monochromatic source of light behind the liquid crystal layer in col. 11, lines 29-41, and col. 12, lines 22-31.

4. As to claim 2, Mizutani teaches the device of claim 1, wherein individual intensities of the one or more of the plurality of backlights are selected to achieve a user selected color in col. 17, lines 18-30.

5. As to claim 5, Mizutani teaches the device of claim 1, wherein only one backlight is illuminated in col. 17, lines 18-30.

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6. The limitation of claim 10 is similar to those of claim 1, though in method form, therefore the rejection of claim 10 will be treated using the same rationale as claim 1.

7. The limitation of claim 11 is similar to those of claim 2, though in method form, therefore the rejection of claim 11 will be treated using the same rationale as claim 2.

8. The limitation of claim 14 is similar to those of claim 5, though in method form, therefore the rejection of claim 14 will be treated using the same rationale as claim 5.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizutani in view of Sekiguchi et al (US 6,577,361) hereinafter Sekiguchi.

11. As to claim 3, Mizutani teaches all of the claimed limitation of claim 1, except wherein individual intensities of the one or more of the plurality of backlights are minimized while providing a user acceptable contrast level.

However, Sekiguchi conventionally discloses a light source having a weak light emitting intensity, positional distribution of the polarization degree of the second polarizer 22 can be recognized by the observers as the distribution of the contrast ratio in col. 5, lines 33-39.

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12. The limitation of claim 3 is similar to those of claim 12, though in method form, therefore the rejection of claim 12 will be treated using the same rationale as claim 3.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Mizutani for having the weak light emitting intensity while providing the observer as the distribution of the contrast ratio as conventionally disclosed by Sekiguchi, because this would save power consumption of the electronic device.

13. Claims 4 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizutani in view of Johnson (US 6,608,614).

14. As to claim 4, Mizutani teaches all of the claimed limitation of claim 1, except wherein a output intensity of one or more of the plurality of backlights is set to zero.

Johnson teaches adjusting LEDs 32 until in step 68 it is determined that there is no difference between actual chromaticity A and target chromaticity T (i.e., $\Delta=0$) in figure 4, col. 4, lines 45-47.

15. The limitation of claim 13 is the same as those of claim 4 and therefore the claim will be rejected using the same rationale.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Mizutani to have the chromaticity "T" equal to zero (corresponding to output intensity is set to zero) as taught by Johnson, because this would extend life of the backlight, reduce the need to replace the backlight, and eliminate multiple LCD backlight production lines (col. 6, lines 32-47 of Johnson).

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17. As to claim 7, Mizutani teaches all of the claimed limitation of claim 1, except wherein the continuous illumination of the one or more of the plurality of backlights is one of a plurality of display modes that can be selected by the user.

However, Cole teaches multi-mode backlight for electronic device in fig. 1 and 4, col. 2, line33-49 and col. 4, lines 14-39.

18. The limitation of claim 16 is the same as those of claim 7 and therefore the claim will be rejected using the same rationale.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the control circuit of Mizutani for having multi-mode backlight for electronic device as taught by Cole, because this would control brightness and extend the operating life of the display panels (col. 1, lines 7-10 of Cole).

Allowable Subject Matter

19. Claims 8 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the cited prior art, single or combination, does not teach or suggest an electronic device, comprising: wherein the frame rate frequency of the field sequential liquid crystal display is set to between about 24 and about 70 Hertz, and wherein the frame rate frequency of the field sequential liquid crystal display is set to between about 24

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and about 40 Hertz. If add this distinct feature to the independent claim 1 and will render the above limitation would be allowable and along with other limitations as recited in the independent claim 1.

20. Claim 17 is allowed.

The following is a statement of reasons for the indication of allowable subject matter: the cited prior art, single or combination, does not teach or suggest an electronic device, comprising: wherein the frame rate frequency of the field sequential liquid crystal display is set to between about 24 and about 40 Hertz, and the individual intensities of the one or more of the plurality of backlights are selected to achieve a user selected color, and along with other limitations as recited in the independent claim 17.

Conclusion

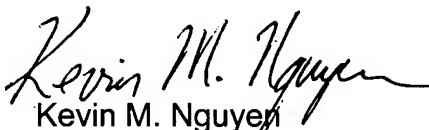
21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN M. NGUYEN whose telephone number is 571-272-7697. The examiner can normally be reached on MON-THU from 8:00-6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, a supervisor RICHARD A. HJERPE can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8000.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the Patent Application Information Retrieval system, see <http://portal.uspto.gov/external/portal/pair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Kevin M. Nguyen
Patent Examiner
Art Unit 2629

KMN
October 27, 2006